

CLAIMS

Therefore, having thus described the invention, at least the following is claimed:

- 1 1. A sequential signal selection system comprising:
 - 2 a processor;
 - 3 a memory device coupled to the processor;
 - 4 at least one radio/transceiver coupled to the processor; and
 - 5 an analog pre-selection network coupled to the at least one
 - 6 radio/transceiver.
- 1 2. The sequential signal selection system of claim 1, wherein the analog
2 pre-selection network comprises:
 - 3 a beam forming network;
 - 4 an antenna array coupled to the beam forming network;
 - 5 a switching network coupled to the beam forming network; and
 - 6 an analog pre-select coupled to the switching network, and to the beam
 - 7 forming network.
- 1 3. The sequential signal selection system of claim 1, wherein the analog
2 pre-selection network comprises:
 - 3 a first analog pre-selection sub-network;
 - 4 a second analog pre-selection sub-network; and
 - 5 a third analog pre-selection sub-network coupled to the first analog pre-
 - 6 selection sub-network, and to the second analog pre-selection sub-network.
- 1 4. The sequential signal selection system of claim 3, wherein the third
2 analog pre-selection sub-network comprises:
 - 3 a third switching network coupled to the at least one radio/transceiver;
 - 4 and
 - 5 a third analog pre-select coupled to the third switching network.

1 5. The sequential signal selection system of claim 4, wherein the second
2 analog pre-selection sub-network comprises:

3 a second switching network coupled to the third switching network;
4 a second beamforming network coupled to the second switching
5 network, the second beam forming network coupled to a second antenna array;
6 and
7 a second analog pre-select coupled to the second beam forming network,
8 to the second switching network, and to the processor.

1 6. The sequential signal selection system of claim 5, wherein the first
2 analog pre-selection sub-network comprises:

3 a first switching network coupled to the third switching network;
4 a first beam forming network coupled to the first switching network, the
5 first beam forming network coupled to a first antenna array; and
6 a first analog pre-select coupled to the first beam forming network, to
7 the first switching network, and to the processor.

1 7. The sequential signal selection system of claim 4, wherein the second
2 analog pre-selection sub-network comprises:

3 a second switching network coupled to the third switching network, the
4 second switching network coupled to a second antenna array; and
5 a second analog pre-select coupled to the second antenna array, and to
6 the second switching network.

1 8. The sequential signal selection system of claim 7, wherein the second
2 analog pre-select is coupled to the processor.

1 9. The sequential signal selection system of claim 8, wherein the first
2 analog pre-selection sub-network comprises:

3 a first switching network coupled to the third switching network; the
4 first switching network coupled to a first antenna array; and

5 a first analog pre-select coupled to the first antenna array, to the first
6 switching network, and to the processor.

1 10. The sequential signal selection system of claim 2, wherein the analog
2 pre-select comprises:

3 a band pass filter, the band pass filter coupled to the beam forming
4 network;

5 an amplifier coupled to the band pass filter;

6 a detector coupled to the amplifier; and

7 a sorting device coupled to the detector, to the processor, and to the
8 switching network.

1 11. The sequential signal selection system of claim 2, wherein the analog
2 pre-select comprises:

3 a band pass filter coupled to the beam forming network;

4 an amplifier coupled to the band pass filter;

5 an analog correlation receiver coupled to the amplifier; and

6 a sorting device coupled to the analog correlation receiver, to the
7 processor, and to the switching network.

1 12. The sequential signal selection system of claim 2, wherein the analog
2 pre-select comprises:

3 a band pass filter, the band pass filter coupled to the beam forming
4 network;

5 an amplifier coupled to the band pass filter;

6 a detector coupled to the amplifier;

7 a modulated frequency sorter coupled to the detector; and

8 a sorting device coupled to the modulated frequency sorter, to the
9 switching network, and to the processor.

1 13. A sequential signal selection method, comprising the steps of:
2 pre-selecting at least two signals from a set of signals based on a pre-
3 selection method; and
4 selecting at least one signal from the at least two signals based on a
5 selection method.

1 14. The sequential signal selection method of claim 13, wherein the pre-
2 selection method is a receive signal strength indicator method.

1 15. The sequential signal selection method of claim 13, wherein the pre-
2 selection method comprises the steps of:
3 filtering the set of signals;
4 amplifying the set of signals;
5 rectifying the set of signals; and
6 sorting the set of signals to obtain the at least two signals.

1 16. The sequential signal selection method of claim 13, wherein the pre-
2 selection method comprises the steps of:
3 filtering the set of signals;
4 amplifying the set of signals;
5 comparing a code of each signal in the set of signals to a pre-determined
6 code; and
7 sorting the set of signals to obtain the at least two signals.

1 17. The sequential signal selection method of claim 13, wherein the pre-
2 selection method comprises the steps of:
3 filtering the set of signals;
4 amplifying the set of signals;
5 comparing frequency of envelope of each signal in the set of signals to a
6 pre-determined frequency; and
7 sorting the set of signals to obtain the at least two signals.

1 18. The sequential signal selection method of claim 13, wherein the set of
2 signals comprises a set of radio frequency signals, a set of acoustic signals, a set of
3 optical signals, and a set of infrared signals.

1 19. The sequential signal selection method of claim 13, wherein the
2 selection method comprises the steps of:

3 comparing the at least two signals to a threshold; and

4 sorting the at least two signals to obtain the at least one signal, wherein
5 the at least two signals meet the threshold.

1 20. A sequential signal selection system, comprising:

2 means for pre-selecting at least two signals from a set of signals based
3 on a pre-selection method; and

4 means for selecting at least one signal from the at least two signals based
5 on a selection method.

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